BARK CHARACTERS OF SOME BAHAMA TREES AND SHRUBS

William T. Gillis
Department of Biology
Hope College
Holland, Michigan 49423

and

George R. Proctor
Science Museum
Institute of Jamaica
Kingston, Jamaica

During visits to the Bahama Islands and the Turks and Caicos Islands in pursuit of our work in revising the Bahama Flora, the authors have made collections of wood as well as herbarium specimens. These wood samples have been deposited in the Wood Laboratory at Harvard University. Herbarium voucher specimens for these wood samples have been deposited in the herbaria of the Arnold Arboretum and of the Institute of Jamaica.

Because of the diagnostic value of differing bark characteristics, we have felt that it would be useful to publish illustrations of some of the wood samples which we have deposited at Harvard to demonstrate these bark patterns. For a number of the species involved, this is undoubtedly the first occasion on which their woods have been placed on permanent file; moreover, this photographic record of the bark characteristics is also the first for a number of the included species.

Some of the bark patterns show a natural blotchiness; others are mottled due to the presence of undetermined crustose lichens. Nevertheless the general bark patterns -- smooth or furrowed, light or dark -- is apparent. All figures except No. 8 are to the same scale. The sample of *Piscidia piscipula* in Fig. 1 is two inches (5.1 cm) in diameter. The two samples in Fig. 8 are nearly three inches (7.5 cm) in diameter.

Of some interest is the difference in bark patterns among members of the same family: Fig. 1 shows (except for *Chrysophyllum*) members of the Leguminosae; Fig. 4 (with the exception of *Erythroxylum*) all Euphorbiaceae; the three specimens to the right in Fig. 6 (*Strumpfia, Erithalis,* and *Guettarda*) are all Rubiaceae. Nomenclature follows Britton and Millspaugh (1920) as modified by Gillis (1973 and 1974). The degree of hardness varied considerably among the samples. We made no attempt to measure this variation quantitatively. Qualitatively, however, it was evident that the

softest wood was that of *Calotropis procera*, the whole sawing process having been accomplished in four strokes of the saw. The hardest woods were those of *Suriana maritima* and *Krugiodendron ferreum*, the latter being known as "ironwood" in the Bahamas. Milky sap gushed from the cut surface of *Euphorbia gymnonota*, covering the saw and sawyer with its sticky effluvium.

We wish to acknowledge field assistance from Mr. George N. Avery and Mr. Errol Scott, and co-operation from Dr. Elizabeth Wheeler of the Harvard Wood Laboratory. Photographs were taken by Mr. John J. Lupo of the Harvard University Biological Laboratories.

We wish to acknowledge with appreciation a generous, anonymous grant to the Arnold Arboretum of Harvard University under which auspices the first author worked during this study. Further, we are indebted to a grant to us from the National Geographic Society for floristic and phytogeographic examination of the southern Bahamas and the Turks and Caicos Islands, under which auspices we traveled to the research site.

LITERATURE CITED

Britton, N.L. and C.F. Millspaugh. 1920. The Bahama Flora. Privately published. Reprinted 1962 without change of pagination. Hafner Publishing Co. New York. 625 pp.

Gillis, William T. 1973. Name changes for the seed plants in the Bahama Flora. Rhodora 76: 67-138.

_____. 1974. Phantoms in the flora of the Bahamas. Phytologia 29: 154-166.

TABLE 1 - COLLECTION DATA FOR SPECIMENS

Species	Family	Gillis Collection Number	Harvard Wood Laboratory No.	Origin
Ateramnus lucidus	Euphorbiaceae	12089	29509	Inagua
Bontia daphnoides	Myoporaceae	12184	29505	Grand Turk
Bursera inaguensis	Burseraceae	12141	29511	Inagua
Byrsonima lucida	Malpighiaceae	12170	29521	Inagua
Calotropis procera	Asclepiadaceae	12274	29502	Grand Turk
Capparis cynophallophora	Capparaceae	12140	29534	Inagua
Chrysophyllum oliviforme	Sapotaceae	11983	29513	New Providence
Coccoloba uvifera	Polygonaceae	11976	29519	New Providence
Coccothrinax inaguensis	Palmae	12166	29520	Inagua
Conocarpus erectus	Combretaceae	11977	29531	New Providence
Cordia sebestena	Boraginaceae	12164	29526	Inagua
Crossopetalum rhacoma	Celastraceae	12120	29522	Inagua
Drypetes diversifolia	Euphorbiaceae	12084	29528	Inagua
Erithalis fruticosa	Rubiaceae	12121	29510	Inagua
Erythroxylum rotundifolium	Erythroxylaceae	12118	29508	Inagua
Euphorbia gymnonota	Euphorbiaceae	12086	29514	Inagua

Ficus elastica	Moraceae	11981	29500	New Providence
Gochnatia pauciflosculа	Compositae	12143	29502	Inagua
Guapira discolor	Nyctaginaceae	12167	29524	Inagua
Guettarda krugii	Rubiaceae	12094	29504	Inagua
Krugiodendron ferreum	Rhamnaceae	12142	29515	Inagua
Leucaena leucocephala	Leguminosae	11980	29535	New Providence
Lysiloma bahamense	Leguminosae	11979	29536	New Providence
Lysiloma sabicu	Leguminosae	11986	29512	New Providence
Manilkara bahamensis	Sapotaceae	12159	29518	Inagua
Myrsine floridana	Myrsinaceae	12169	29506	Inagua
Nectandra coriacea	Lauraceae	11978	29516	New Providence
Phyllanthus epiphyllanthus	Euphorbiaceae	12206	29530	North Caicos
Pinus caribaea var. bahamensis	Pinaceae	12301	29501	Middle Caicos
Piscidia piscipula	Leguminosae	11984	29523	New Providence
Psidium guajava	Myrtaceae	11989	29533	New Providence
Psidium longipes var. orbiculare	Myrtaceae	12158	29525	Inagua
Reynosia septentrionalis	Rhamnaceae	11982	29527	New Providence

Strumpfia maritima	Rubiaceae	12149	29529	Inagua
Suriana maritima	Surianaceae	11888	29507	New Providence
Terminalia catappa	Combretaceae	11985	29517	New Providence
Zanthoxylum flavum	Rutaceae	12091	29532	Inagua

Fig. 1

Fig. 2

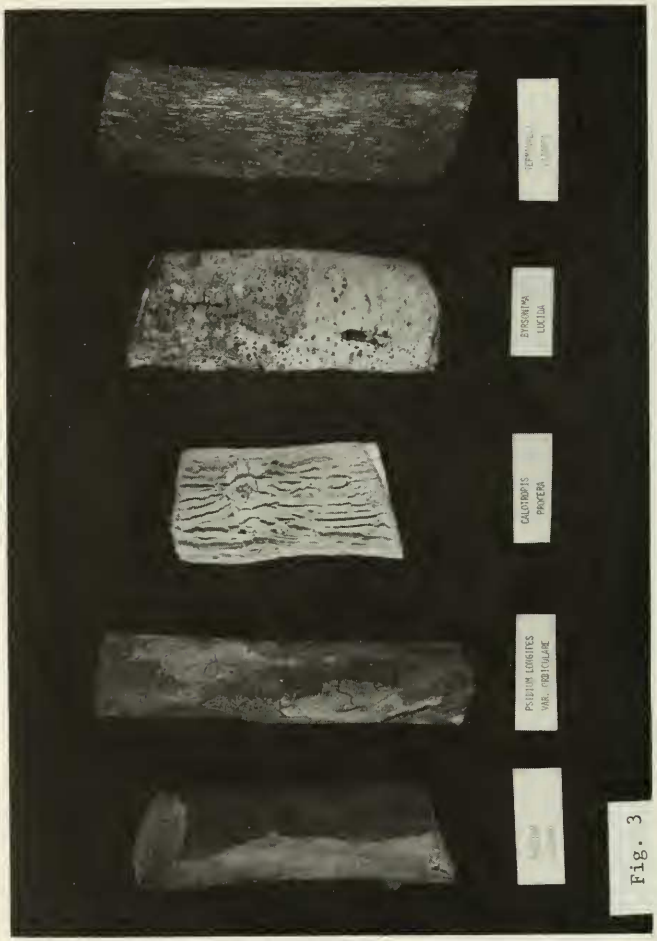
EXOSPORIUM LUCIDA
CALOSTROPHIS PROVERA
PUCCINIA LONGISTES VAR. VORTICULARE

Fig. 3

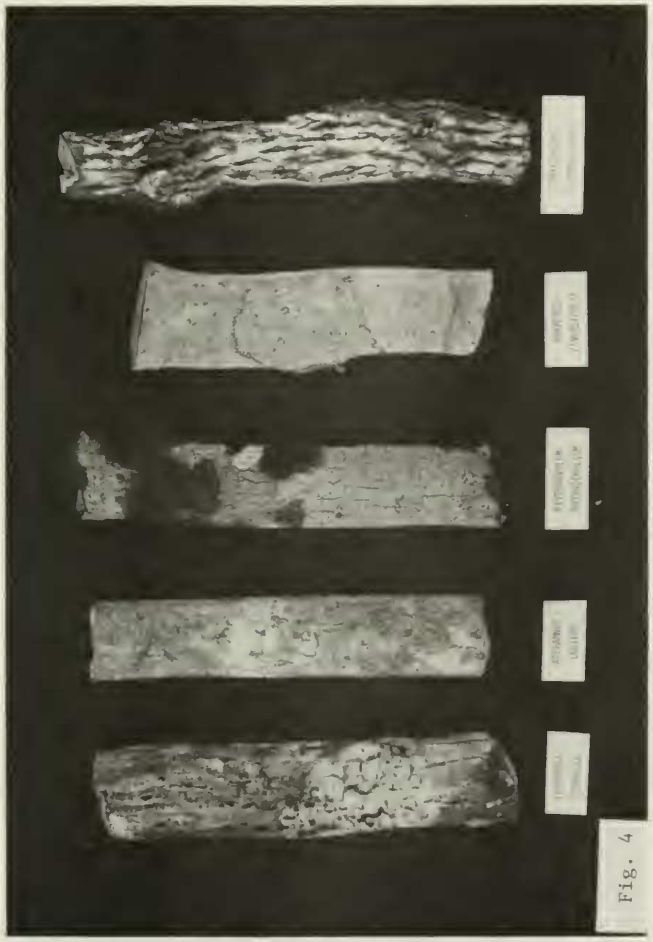

Fig. 4

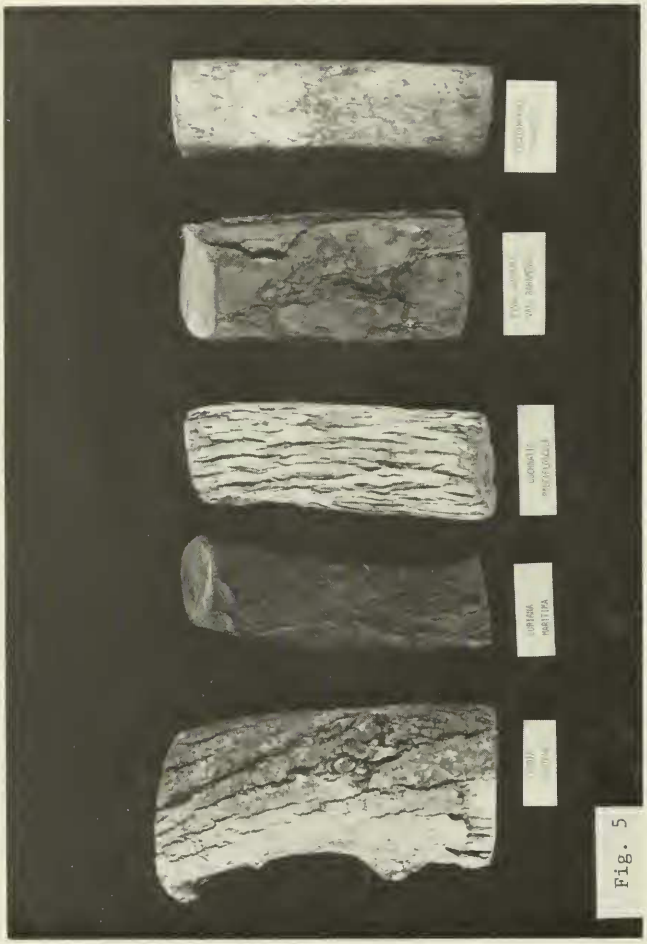

Fig. 5

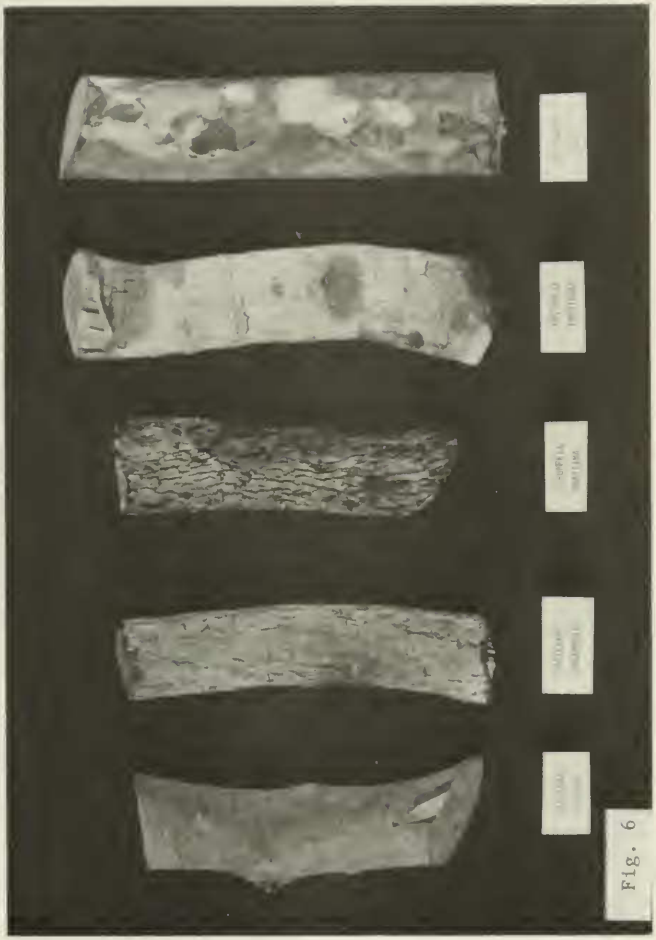

Fig. 6

Fig. 7

Fig. 8